

PR 94-54

APPENDIX 2

CASING AND CEMENTING REPORT

SUNBIRD-1

PR 94-54

OPEN FILE

BARCODE Nº: P00715

CASING AND CEMENTING REPORT

SUNBIRD-1

DEPT OF MINES & ENERGY
DO NOT REMOVE



P00715

TEIKOKU OIL (BONAPARTE GULF) Co. Ltd.

CASING RUNNING LIST

WELL : SUNBIRD - 1

PERMIT: EP - 32

DATE: 20/8/94

Rig: RON TAPMEYER

Casing size (in) 20" Wt(ppf) 94.00

Grade: X-56

Connection: RL-4

Supervisor: H.FLINK-G.ROWLANDS

Measured by: R & B

Order	Jt No:	Length	Total	Depth	Comment	Order	Jt No:	Length	Total	Depth	Comment
				273.30	Bottom of Shoe						
1	Shoe A	12.15	12.15	261.15	C/L 3m above shoe						
2	5	11.83	23.98	249.32	C/L on collar						Total from last col.
3	6	11.83	35.81	237.49	C/L on collar						
4	7	11.83	47.64	225.66	C/L on collar						
5	8	11.82	59.46	213.84							
6	9	11.82	71.28	202.02							
7	10	11.83	83.11	190.19							
8	11	11.82	94.93	178.37							
9	12	11.82	106.75	166.55							
10	13	11.83	118.58	154.72							
11	14	11.84	130.42	142.88							
12	2	11.83	142.25	131.05							
Total		142.25				Total					

13	16	11.83	154.08	119.22							
14	17	11.83	165.91	107.39							
15	18	11.85	177.76	95.54							
16	19	11.84	189.60	83.70							
17	20	11.82	201.42	71.88							
18	21	11.84	213.26	60.04							
19	22	11.83	225.09	48.21							
20	23	11.83	236.92	36.38							
21	24	11.84	248.76	24.54							
22	Hgr lwr	4.67	253.43	19.87							
Total		111.18				Total					

23	Hgr upr	0.33	253.76	19.54							
24	R/T	4.83	258.59	14.71							
25	25	11.83	270.42	2.88							
26	26	11.83	282.25	-8.95							
Total		28.82				Total					

Total						Total					
-------	--	--	--	--	--	-------	--	--	--	--	--

Total						Total					
-------	--	--	--	--	--	-------	--	--	--	--	--

Total Casing:	30 Jts	Remarks:		
Casing Used:	22 Jts		Used Shoe A Hgr A	Left-over - Joints 1,3,4,15,27,28,29,30
Casing Left:	8 Jts		On deck shoe B Hgr B	Cut and recovered joints 25 and 26.
			Make-up Torque - 25,000 Ft.lbs.	

TEIKOKU OIL (BONAPARTE GULF) Co. Ltd.

CASING RUNNING LIST

WELL : **SUNBIRD-1**

PERMIT: **EP-32**

DATE: **23/8/94**

Rig: **RON TAPMEYER**

Casing size (in) **13 3/8"**

Wt(ppf) **68.00**

Grade: **K-55**

Connection: **BUTTRESS**

Supervisor: **H. FLINK -G. ROWLAND**

Measured by: **R&B**

Order	Jt No:	Length	Total	Depth	Comment	Order	Jt No:	Length	Total	Depth	Comment
				1349.00	Bottom of Shoe						
1	Shoe A	12.16	12.16	1336.84	Centraliser						
2	1	11.67	23.83	1325.17	Centraliser			0.00	612.37	736.63	Total from last col.
3	F/Col	12.26	36.09	1312.91	Centraliser	53	51	11.72	624.09	724.91	
4	2	11.93	48.02	1300.98	Radio active pip tag	54	52	11.60	635.69	713.31	
5	3	12.02	60.04	1288.96		55	53	11.90	647.59	701.41	
6	4	11.78	71.82	1277.18		56	54	11.89	659.48	689.52	
7	5	11.79	83.61	1265.39		57	55	11.81	671.29	677.71	
8	6	11.73	95.34	1253.66		58	56	11.86	683.15	665.85	
9	7	11.84	107.18	1241.82		59	57	11.79	694.94	654.06	
10	8	11.73	118.91	1230.09		60	58	11.92	706.86	642.14	
11	9	11.78	130.69	1218.31		61	59	11.63	718.49	630.51	
12	10	11.83	142.52	1206.48		62	60	11.92	730.41	618.59	
Total		142.52				Total		118.04			
13	11	11.80	154.32	1194.68		63	61	11.76	742.17	606.83	
14	12	11.67	165.99	1183.01		64	62	11.68	753.85	595.15	
15	13	11.77	177.76	1171.24		65	63	11.51	765.36	583.64	
16	14	11.32	189.08	1159.92		66	64	11.83	777.19	571.81	
17	15	11.81	200.89	1148.11		67	65	11.79	788.98	560.02	
18	16	11.83	212.72	1136.28		68	66	11.53	800.51	548.49	
19	17	11.81	224.53	1124.47		69	67	11.71	812.22	536.78	
20	18	11.53	236.06	1112.94		70	68	11.76	823.98	525.02	
21	19	11.49	247.55	1101.45		71	69	11.79	835.77	513.23	
22	20	11.64	259.19	1089.81		72	70	11.90	847.67	501.33	
Total		116.67				Total		117.26			
23	21	11.83	271.02	1077.98		73	71	11.74	859.41	489.59	
24	22	11.78	282.80	1066.20		74	72	11.72	871.13	477.87	
25	23	11.68	294.48	1054.52		75	73	11.83	882.96	466.04	
26	24	11.81	306.29	1042.71		76	74	11.95	894.91	454.09	
27	25	11.89	318.18	1030.82		77	75	11.92	906.83	442.17	
28	26	11.73	329.91	1019.09		78	76	11.50	918.33	430.67	
29	27	11.91	341.82	1007.18		79	77	11.79	930.12	418.88	
30	28	11.93	353.75	995.25		80	78	11.54	941.66	407.34	
31	29	11.83	365.58	983.42		81	79	11.66	953.32	395.68	
32	30	11.72	377.30	971.70		82	80	11.88	965.20	383.80	
Total		118.11				Total		117.53			
33	31	11.74	389.04	959.96		83	81	11.59	976.79	372.21	
34	32	11.55	400.59	948.41		84	82	11.85	988.64	360.36	
35	33	11.71	412.30	936.70		85	83	11.43	1000.07	348.93	
36	34	11.86	424.16	924.84		86	84	11.81	1011.88	337.12	
37	35	11.73	435.89	913.11		87	85	11.90	1023.78	325.22	
38	36	11.81	447.70	901.30		88	86	11.90	1035.68	313.32	
39	37	11.88	459.58	889.42		89	87	11.84	1047.52	301.48	
40	38	11.58	471.16	877.84		90	88	11.57	1059.09	289.91	
41	39	11.52	482.68	866.32		91	89	11.01	1070.10	278.90	
42	40	11.74	494.42	854.58		92	90	11.55	1081.65	267.35	
Total		117.12				Total		116.45			
43	41	11.85	506.27	842.73		93	91	11.89	1093.34	255.66	
44	42	11.70	517.97	831.03		94	92	11.54	1104.88	244.12	
45	43	11.89	529.86	819.14		95	93	11.65	1116.53	232.47	
46	44	11.79	541.65	807.35		96	94	11.95	1128.48	220.52	
47	45	11.87	553.52	795.48		97	95	11.68	1140.16	208.84	
48	46	11.63	565.15	783.85		98	96	11.66	1151.82	197.18	
49	47	11.56	576.71	772.29		99	97	11.64	1163.46	185.54	
50	48	11.92	588.63	760.37		100	98	11.79	1175.25	173.75	
51	49	11.79	600.42	748.58		101	99	11.62	1186.87	162.13	
52	50	11.95	612.37	736.63		102	100	11.88	1198.75	150.25	
Total		117.95				Total		117.10			

Total Casing:	126 Jts		Remarks:
Casing Used:	113 Jts		
Casing Left:	13 Jts		
		Used Float Shoe joint A Used Float Collar joint A Float in float collar was jammed closed and had to be pumped open prior to RIH Top of cement estimated to be at approx 980m	

**TEIKOKU OIL (BONAPARTE GULF) CO. LTD.
CASING RUNNING LIST**

WELL : SUNBIRD-1

PERMIT: EP-32

DATE: 23/8/94

Rig: RON TAPMEYER

Casing size (in) 13 3/8" Wt(ppf) 68.00

Grade: K-55

Connection: BUTTRESS

Supervisor: H. FLINK -G. ROWLAND

Measured by: R&B

Order	Jt No:	Length	Total	Depth	Comment	Order	Jt No:	Length	Total	Depth	Comment
			1198.75	150.25	Total from page 1						Total from last col.
103	101	11.91	1210.66	138.34							
104	102	11.78	1222.44	126.56							
105	103	11.72	1234.16	114.84							
106	104	11.65	1245.81	103.19							
107	105	11.65	1257.46	91.54							
108	106	11.40	1268.86	80.14							
109	107	11.84	1280.70	68.30							
110	108	11.53	1292.23	56.77							
111	109	11.96	1304.19	44.81							
112	110	11.82	1316.01	32.99							
Total		117.26				Total					

113	111	11.87	1327.88	21.12							
114	112	11.72	1339.60	9.40	Cut to install W/head						
115	113	11.79	1351.39	-2.39	Laid out after cemented						
Total		35.38				Total					

Total						Total					

PUP	1	2.91	2.91		Not used						
PUP	2	2.94	5.85		Not used						
HGR	A	5.58	11.43		Not used						
HGR	B	5.58	17.01		Not used						
R/T		4.78	21.79		Not used						
Total		21.79				Total					

Total						Total					

Total Casing:	126 Jts		Remarks:
Casing Used:	113 Jts		Joint # 113 was laid out after the cement job
Casing Left:	13 Jts		Joint # 112 was cut prior to installation of well head

TEIKOKU OIL (BONAPARTE GULF) CO LTD

Casing List

WELL :	SUNBIRD-1	DATE:	27/9/94
PERMIT:	EP-32	RIG:	Ron Tappmeyer
Casing:	9 5/8"	Supervisor:	Henry Flink / Vince Tilley
Grade:	N-80		
Wt(ppf):	47.00		

Jt No:	Length	Total	Depth	Comment
			2543.50	Bottom of Shoe
Shoe A	12.44	12.44	2531.06	2 x Centraliser
B/Lock.A	11.94	24.38	2519.12	Centraliser / RA pip
F/Col	12.45	36.83	2506.67	Centraliser
1	11.90	48.73	2494.77	Centraliser
2	11.96	60.69	2482.81	Centraliser
3	11.87	72.56	2470.94	
4	11.99	84.55	2458.95	
5	11.94	96.49	2447.01	
6	11.90	108.39	2435.11	
7	11.99	120.38	2423.12	
8	11.77	132.15	2411.35	
9	11.91	144.06	2399.44	

Jt No:	Length	Total	Depth	Comment
		462.52	2080.98	From last Col.
35	11.98	474.50	2069.00	
36	11.87	486.37	2057.13	
37	11.98	498.35	2045.15	
38	12.00	510.35	2033.15	
39	11.90	522.25	2021.25	
40	11.96	534.21	2009.29	
41	11.93	546.14	1997.36	
42	11.92	558.06	1985.44	
43	11.81	569.87	1973.63	
44	11.91	581.78	1961.72	

10	11.81	155.87	2387.63	
11	11.89	167.76	2375.74	
12	11.76	179.52	2363.98	
13	11.68	191.20	2352.30	
14	11.93	203.13	2340.37	
15	11.79	214.92	2328.58	
16	11.89	226.81	2316.69	
17	11.97	238.78	2304.72	
18	11.94	250.72	2292.78	
19	11.97	262.69	2280.81	

45	11.98	593.76	1949.74	
46	11.93	605.69	1937.81	
47	11.94	617.63	1925.87	
48	11.84	629.47	1914.03	
49	11.98	641.45	1902.05	
50	11.83	653.28	1890.22	
51	11.96	665.24	1878.26	
52	11.88	677.12	1866.38	
53	11.90	689.02	1854.48	
54	11.97	700.99	1842.51	

20	11.93	274.62	2268.88	
21	11.93	286.55	2256.95	
22	11.98	298.53	2244.97	
23	11.97	310.50	2233.00	
24	11.94	322.44	2221.06	
25	12.02	334.46	2209.04	
26	11.88	346.34	2197.16	
27	11.96	358.30	2185.20	
28	11.39	369.69	2173.81	
29	11.79	381.48	2162.02	

55	11.93	712.92	1830.58	
56	11.90	724.82	1818.68	
57	11.96	736.78	1806.72	
58	11.95	748.73	1794.77	
59	11.95	760.68	1782.82	
60	11.91	772.59	1770.91	
61	11.92	784.51	1758.99	
62	11.90	796.41	1747.09	
63	11.78	808.19	1735.31	
64	11.60	819.79	1723.71	

30	12.06	393.54	2149.96	
31	11.59	405.13	2138.37	Centraliser
ECP	2.66	407.79	2135.71	
32	11.96	419.75	2123.75	Centraliser
DVcollar	0.83	420.58	2122.92	
B/lock B	11.90	432.48	2111.02	Centralizer
Pup A	3.11	435.59	2107.91	
Pup B	2.97	438.56	2104.94	
33	12.06	450.62	2092.88	
34	11.90	462.52	2080.98	

65	11.78	831.57	1711.93	
66	11.80	843.37	1700.13	
67	11.89	855.26	1688.24	
68	11.98	867.24	1676.26	
69	11.97	879.21	1664.29	
70	11.98	891.19	1652.31	
71	11.86	903.05	1640.45	
72	11.95	915.00	1628.50	
73	11.84	926.84	1616.66	
74	11.93	938.77	1604.73	

TEIKOKU OIL (BONAPARTE GULF) CO LTD

Casing List

WELL :	SUNBIRD-1	DATE:	27/9/94
PERMIT:	EP-32	RIG:	Ron Tappmeyer
Casing:	9 5/8"	Supervisor:	Henry Flink / Vince Tilley
Grade:	N-80		
Wt(ppf):	47.00		

Jt No:	Length	Total	Depth	Comment
		938.77	1604.73	From page 1
75	11.84	950.61	1592.89	
76	11.96	962.57	1580.93	
77	11.94	974.51	1568.99	
78	11.98	986.49	1557.01	
79	11.92	998.41	1545.09	
80	11.96	1010.37	1533.13	
81	11.97	1022.34	1521.16	
82	11.93	1034.27	1509.23	
83	11.77	1046.04	1497.46	
84	11.72	1057.76	1485.74	

Jt No:	Length	Total	Depth	Comment
		1414.28	1129.22	
115	11.95	1426.23	1117.27	
116	11.80	1438.03	1105.47	
117	11.92	1449.95	1093.55	
118	11.86	1461.81	1081.69	
119	11.83	1473.64	1069.86	
120	11.94	1485.58	1057.92	
121	11.95	1497.53	1045.97	
122	11.90	1509.43	1034.07	
123	11.95	1521.38	1022.12	
124	11.88	1533.26	1010.24	

85	11.87	1069.63	1473.87	
86	11.97	1081.60	1461.90	
87	11.93	1093.53	1449.97	
88	12.01	1105.54	1437.96	
89	11.97	1117.51	1425.99	
90	11.96	1129.47	1414.03	
91	11.94	1141.41	1402.09	
92	11.97	1153.38	1390.12	
93	11.95	1165.33	1378.17	
94	11.97	1177.30	1366.20	

125	11.89	1545.15	998.35	
126	11.95	1557.10	986.40	
127	11.95	1569.05	974.45	
128	11.98	1581.03	962.47	
129	11.99	1593.02	950.48	
130	11.96	1604.98	938.52	
131	11.97	1616.95	926.55	
132	11.91	1628.86	914.64	
133	11.98	1640.84	902.66	
134	11.62	1652.46	891.04	

95	11.91	1189.21	1354.29	
96	11.81	1201.02	1342.48	
97	11.95	1212.97	1330.53	
98	11.96	1224.93	1318.57	
99	11.97	1236.90	1306.60	
100	11.98	1248.88	1294.62	
101	11.53	1260.41	1283.09	
102	11.78	1272.19	1271.31	
103	11.96	1284.15	1259.35	
104	11.61	1295.76	1247.74	

135	11.95	1664.41	879.09	
136	11.94	1676.35	867.15	
137	11.98	1688.33	855.17	
138	11.97	1700.30	843.20	
139	11.97	1712.27	831.23	
140	11.96	1724.23	819.27	
141	11.73	1735.96	807.54	
142	11.94	1747.90	795.60	
143	11.99	1759.89	783.61	
144	11.97	1771.86	771.64	

105	11.97	1307.73	1235.77	
106	11.96	1319.69	1223.81	
107	11.77	1331.46	1212.04	
108	11.95	1343.41	1200.09	
109	11.96	1355.37	1188.13	
110	11.97	1367.34	1176.16	
111	11.97	1379.31	1164.19	
112	11.94	1391.25	1152.25	
113	11.84	1403.09	1140.41	
114	11.19	1414.28	1129.22	

145	11.94	1783.80	759.70	
146	11.87	1795.67	747.83	
147	11.52	1807.19	736.31	
148	11.96	1819.15	724.35	
149	11.87	1831.02	712.48	
150	11.87	1842.89	700.61	
151	11.95	1854.84	688.66	
152	11.97	1866.81	676.69	
153	11.97	1878.78	664.72	
154	12.04	1890.82	652.68	

TEIKOKU OIL (BONAPARTE GULF) CO LTD

Casing List

WELL : SUNBIRD-1 PERMIT: EP-32 Casing: 9 5/8" Grade: N-80 Wt(ppf): 47.00	DATE: 27/9/94 RIG: Ron Tappmeyer Supervisor: Henry Flink / Vince Tilley
---	--

Jt No:	Length	Total	Depth	Comment
		1890.82	652.68	From page 2
155	11.81	1902.63	640.87	
156	11.94	1914.57	628.93	
157	11.97	1926.54	616.96	
158	11.93	1938.47	605.03	
159	11.94	1950.41	593.09	
160	11.97	1962.38	581.12	
161	11.97	1974.35	569.15	
162	11.95	1986.30	557.20	
163	11.96	1998.26	545.24	
164	11.95	2010.21	533.29	

Jt No:	Length	Total	Depth	Comment
		2367.12	176.38	
195	11.89	2379.01	164.49	
196	11.61	2390.62	152.88	
197	11.95	2402.57	140.93	
198	11.98	2414.55	128.95	
199	11.80	2426.35	117.15	
200	11.93	2438.28	105.22	
201	11.88	2450.16	93.34	
202	12.05	2462.21	81.29	
203	11.82	2474.03	69.47	
204	11.92	2485.95	57.55	

165	11.99	2022.20	521.30	
166	11.96	2034.16	509.34	
167	11.81	2045.97	497.53	
168	11.82	2057.79	485.71	
169	11.97	2069.76	473.74	
170	11.95	2081.71	461.79	
171	11.75	2093.46	450.04	
172	11.93	2105.39	438.11	
173	11.98	2117.37	426.13	
174	11.95	2129.32	414.18	

205	11.99	2497.94	45.56	
206	11.97	2509.91	33.59	
207	11.96	2521.87	21.63	
208	11.61	2533.48	10.02	
209	11.54	2545.02	-1.52	

175	11.82	2141.14	402.36	
176	11.96	2153.10	390.40	
177	11.91	2165.01	378.49	
178	11.98	2176.99	366.51	
179	11.94	2188.93	354.57	
180	11.65	2200.58	342.92	
181	11.97	2212.55	330.95	
182	11.78	2224.33	319.17	
183	11.92	2236.25	307.25	
184	11.96	2248.21	295.29	

185	11.93	2260.14	283.36	
186	11.91	2272.05	271.45	
187	11.91	2283.96	259.54	
188	11.99	2295.95	247.55	
189	11.92	2307.87	235.63	
190	11.94	2319.81	223.69	
191	11.77	2331.58	211.92	
192	11.95	2343.53	199.97	
193	11.97	2355.50	188.00	
194	11.62	2367.12	176.38	

REMARKS:	
Casing running speed 30 secs per joint	Total 213 jnts casing + 2 pup joints used
20 bbls losses to hole while running casing	
Float collar at 2519.12m	

**TEIKOKU OIL (Bonaparte Gulf) Co. Ltd.
CEMENTING REPORT**

GENERAL					
Well Name: SUNBIRD #1	Cement Job: 13 3/8" Casing			Date: 01/09/94	
Rig: RON TAPMEYER	Supervisor: H. FLINK		Engineer: V. TILLEY	Cement Co. DOWELL	
Hole Size: 17.5"	Depth (m): 1354m	MLH Depth: N/A	Top of Liner Hanger: N/A		
Last Casing:- 20"	Wt. lbs/ft 96	Grade: X 56	Thread: Vetco RL4/s	Set at: 273.3m	
This Casing:- 13 3/8"	Wt. lbs/ft 68	Grade: K55	Thread: BTC	Set at: 1349m	
Mud:-	Type: Gel/Poly	Weight: 1.1	Viscosity: 60		
Preflush:-	Type: Sea-water	Weight: 1.02	Viscosity: 20	Annulus length: 79m	
Temperature: 1st Stage	BHST: 57.C	BHCT:	2nd Stage:-	BHCT	
Thick/Time: 1st Stage	Lead: 3.78 hrs	Tail: 2.88 hrs	2nd Stage:-	Tail	

VOLUME CALCULATIONS						
1st Stage			2nd Stage			
Lead			Tail			
OH	ANN	TOTAL	CSG	ANN	TOTAL	
Volume:	195.5 bbls	195.5 bbls	12 bbls	55.5 bbls	67.5 bbls	
Excess:	10%			10%		

CEMENT CALCULATIONS									
		Volume	Yield	Bulk	Dry Additives		Depth:	from	to
1st Stage:	Lead	1100 cu ft	2.12 c.ft/sx	518 sx				1249m	899m
	Tail	379 cu ft	1.15 c.ft/sx	329 sx				1349m	1249m
2nd Stage:	Lead								
	Tail								

MIX WATER CALCULATIONS								
		Bulk	Wtr.Req.	Volume	Type	Mixed	Used	Additives Used
1st Stage:	Lead	518 sx	12.26 gps	151 bbls	D/W		151 bbls	3% bent/.01gps D47/.02 gps D87
	Tail	330 sx	5.02 gps	39 bbls	D/W		39 bbls	.01 gps D47 / .04 gps D87
2nd Stage:	Lead							
	Tail							

DISPLACEMENT DATA									
OPERATION		Strokes	Volume	Density	Rate	Pressure	Start	Finish	% Returns
1st Stage:	Pump Preflush		40 bbls	1.02	5.5 bpm	120 psi	18:10	18:14	100
	Pump Lead		195 bbls	1.5	6.5 bpm	220 psi	18:30	18:58	100
	Pump Tail		68 bbls	1.9	5.5 bpm	120 psi	19:10	19:16	100
	Displace		651 bbls	1.02	22 bpm	750 psi	19:30	20:10	100
2nd Stage:	Pump Preflush								
	Pump Lead								
	Pump Tail								
	Displace								
Plug Bumped?		Y	Floats Held?		Y	Annulus circulated above MLS? No			

REMARKS: Displacement fluid was sea water at 1.02 S.G.
 Pump pressure dropped 200 psi 10 bbls before bumping plug indicating formation break down.
 Expected bump pressure 710 psi - Actual bump pressure 490 psi
 Plug bumped and pressure tested to 2400 psi / 10 min
 Calculated top of cement at 980m (Breakdown assumed to be in sand at 1155m)

**TEIKOKU OIL (Bonaparte Gulf) Co. Ltd.
CEMENTING REPORT**

GENERAL					
Well Name: SUNBIRD #1	Cement Job: 9 5/8" Casing			Date: 27/09/94	
Rig: RON TAPMEYER	Supervisor: H. FLINK		Engineer: V. TILLEY	Cement Co. DOWELL	
Hole Size: 12.25	Depth (m) 2560	MLH Depth: N/A	Top of Liner Hanger:	N/A	
Last Casing: 13 3/8"	Wt. lbs/ft 68	Grade: K 55	Thread: BTC	Set at: 1349m	
This Casing: 9 5/8"	Wt. lbs/ft 47	Grade: N 80	Thread: BTC	Set at: 2543.5m	
Mud:-	Type: KCI/PHPA	Weight: 1.08	Viscosity: 50		
Preflush:-	Type: Sea-water	Weight: 1.02	Viscosity: 20	Annulus length: 94m	
Temperature: 1st Stage	BHST: 93 deg	BHCT: 145 deg	2nd Stage: BHST: 177 deg	BHCT: 121 deg	
Thick/Time: 1st Stage	Lead: N/A	Tail: 3.5 hrs	2nd Stage: Lead: 5 hrs	Tail: 4.2 hrs	

VOLUME CALCULATIONS					
1st Stage			2nd Stage		
Lead			Lead		
Tail			Tail		
CSG	ANN	TOTAL	ANN	TOTAL	CSG
5.8 bbls	81.9 bbls	87.6 bbls	122 bbls	122 bbls	Nil
	Nil		10%		10%
Volume:			Excess:		

CEMENT CALCULATIONS							
	Volume	Yield	Bulk	Dry Additives	Depth:	from	to
1st Stage:	Lead	N/A					
	Tail	492 cu ft	1.18 cf/sx	417 sx		2543m	2150m
2nd Stage:	Lead	686 cu ft	2.14 cf/sx	321 sx	Bentonite @ 3% BWOC	2000m	1700m
	Tail	281 cu ft	1.18 cf/sx	238 sx		2123m	2000m

MIX WATER CALCULATIONS							
	Bulk	Wtr. Req.	Volume	Type	Mixed	Used	Additives Used
1st Stage:	Lead						
	Tail	417 sx	5.2 gps	52 bbls	S/W	52 bbls	52 bbls .01 gps D47 / .15 gps D80 / .25 gps D603
2nd Stage:	Lead	321 sx	12.4 gps	95 bbls	D/W	120 bbls	95 bbls .06 gps D81 / .01 gps D47 / Bent 3%
	Tail	238 sx	5.3 gps	30 bbls	S/W	30 bbls	30 bbls .01 gps D47 / .15 gps D80 / .25 gps D603

DISPLACEMENT DATA									
OPERATION		Strokes	Volume	Density	Rate	Pressure	Start	Finish	% Returns
1st Stage:	Pump Preflush		20 bbls	1.02	6.5 bpm	200 psi	19:30	19:45	100%
	Pump Lead								
	Pump Tail		88 bbls	1.90	6.5 bpm	220 psi	19:50	20:15	100%
	Displace	5184	605 bbls	1.08	14 bpm	350 psi	20:00	21:10	97%
2nd Stage:	Pump Preflush		20 bbls	1.02	5.4 bpm	60 psi	22:47	22:55	100%
	Pump Lead		122 bbls	1.50	6.5 bpm	120 psi	23:00	23:27	100%
	Pump Tail		50 bbls	1.90	5.2 bpm	130 psi	23:27	23:35	100%
	Displace	4355	510 bbls	1.02	14 bpm	600 psi	23:38	0:20	100%

Plug Bumped? Y Floats Held? Y Annulus circulated above MLS? N/A

REMARKS: 26 bbls losses during first stage - Bump pressure 400 psi indicates theoretical TOC @ 2160m
ECP packer set at 2137m with 1800 psi
No losses during 2nd stage
Bump pressure of 500 psi indicates theoretical TOC @ 1700m

**TEIKOKU OIL (Bonaparte Gulf) Co. Ltd.
CEMENTING REPORT**

GENERAL					
Well Name: SUNBIRD #1	Cement Job: Plug back #1			Date: 25/10/94	
Rig: RON TAPMEYER	Supervisor: H. FLINK		Engineer: V. TILLEY	Cement Co. DOWELL	
Hole Size: 8.5	Depth (m) 3324	MLH Depth: N/A	Top of Liner Hanger:	N/A	
Last Casing 9 5/8"	Wt. lbs/ft 47	Grade: N-80	Thread: BTC	Set at: 2543m	
This Casing N/A	Wt. lbs/ft	Grade:	Thread:	Set at:	
Mud:-	Type: KCI/PHPA/Glycol	Weight: 1.25	Viscosity: 68		
Preflush:-	Type: Sea-water	Weight: 1.02	Viscosity: 20	Annulus length: 52m	
Temperature: 1st Stage	BHST: 109 deg	BHCT: 90 deg	2nd Stage: BHST:	BHCT:	
Thick/Time: 1st Stage	Lead: N/A	Tail: 2.3 hrs	2nd Stage: Lead:	Tail:	

VOLUME CALCULATIONS		
	Bbls	
Stinger	2.70	
Annulus	20.5	
Total	23.2	

CEMENT CALCULATIONS								
		Vol(bbl)	Yield(cf/sx)	Bulk(sx)	Dry Additives	Depth:	from	to
1st Stage:	Lead	23.2	1.15	113.3		(+20%)	3324m	3240m
	Tail							
2nd Stage:	Lead							
	Tail							

MIX WATER CALCULATIONS								
		Bulk(sx)	Wtr(gps)	Vol(bbl)	Type	Mixed(bbl)	Used	Additives Used
1st Stage:	Lead	113.3	5.01	13.5	D/W	13.5	13.5	.01 gps D47 / .06 gps D80 / .03 gps D81
	Tail							
2nd Stage:	Lead							
	Tail							

DISPLACEMENT DATA									
OPERATION		Strokes	Vol(bbl)	MW(sg)	Rate(bpm)	PSI	Start	Finish	% Returns
1st Stage:	Pump Preflush		10	1.02	5.0	300	0:25	0:26	100%
	Pump Lead								
	Pump Tail		23.2	1.90	6.5	220	0:38	0:52	100%
	Displace		178	1.25	5.6	300	0:53	1:25	100%
2nd Stage:	Pump Preflush								
	Pump Lead								
	Pump Tail								
	Displace								
Plug Bumped?	N/A		Floats Held?	N/A		Annulus circulated above MLS?	N/A		

REMARKS:

**TEIKOKU OIL (Bonaparte Gulf) Co. Ltd.
CEMENTING REPORT**

GENERAL					
Well Name: SUNBIRD #1	Cement Job: Plug back #2	Date: 25/10/94			
Rig: RON TAPMEYER	Supervisor: H. FLINK	Engineer: V. TILLEY	Cement Co.	DOWELL	
Hole Size: 8.5	Depth (m) 3324	MLH Depth: N/A	Top of Liner Hanger:	N/A	
Last Casing 9 5/8"	Wt. lbs/ft 47	Grade: N-80	Thread: BTC	Set at: 2543m	
This Casing N/A	Wt. lbs/ft	Grade:	Thread:	Set at:	
Mud:-	Type: KCI/PHPA/Glycol	Weight: 1.25	Viscosity: 68		
Preflush:-	Type: Sea-water	Weight: 1.02	Viscosity: 20	Annulus length: 50m	
Temperature 1st Stage	BHST: 93 deg	BHCT: 74 deg	2nd Stage: BHST:	BHCT:	
Thick/Time: 1st Stage	Lead: N/A	Tail: 2.13 hrs	2nd Stage: Lead:	Tail:	

VOLUME CALCULATIONS		
	Bbls	
Stinger	1.04	
Annulus	8.57	
Total	9.60	

CEMENT CALCULATIONS								
		Vol(bbl)	Yield(cf/sx)	Bulk(sx)	Dry Additives	Depth:	from	to
1st Stage:	Lead	9.60	1.15	46.9			2515	2475
	Tail							
2nd Stage:	Lead							
	Tail							

MIX WATER CALCULATIONS								
		Bulk(sx)	Wtr(gps)	Vol(bbl)	Type	Mixed(bbl)	Used	Additives Used
1st Stage:	Lead	46.9	5.02	5.6	D/W	6	5.6	.01 gps D47 / .06 gps D80 / .02 gps D81
	Tail							
2nd Stage:	Lead							
	Tail							

DISPLACEMENT DATA									
OPERATION		Strokes	Vol(bbl)	MW(sg)	Rate(bpm)	PSI	Start	Finish	% Returns
1st Stage:	Pump Preflush		10	1.02	5.0	150	15:50	15:55	100%
	Pump Lead								
	Pump Tail		9.60	1.90	5.0	130	16:00	16:09	100%
	Displace		135	1.25	5.2	150	16:16	16:42	100%
2nd Stage:	Pump Preflush								
	Pump Lead								
	Pump Tail								
	Displace								
Plug Bumped?	N/A		Floats Held?	N/A		Annulus circulated above MLS?	N/A		

REMARKS:

**TEIKOKU OIL (Bonaparte Gulf) Co. Ltd.
CEMENTING REPORT**

GENERAL					
Well Name: SUNBIRD #1	Cement Job: Plug back #3	Date: 27/10/94			
Rig: RON TAPMEYER	Supervisor: H. FLINK	Engineer: V. TILLEY	Cement Co. DOWELL		
Hole Size: 8.5	Depth (m) 3324	MLH Depth: N/A	Top of Liner Hanger: N/A		
Last Casing 9 5/8"	Wt. lbs/ft 47	Grade: N-80	Thread: BTC	Set at: 2543m	
This Casing N/A	Wt. lbs/ft	Grade:	Thread:	Set at:	
Mud:-	Type: Sea Water	Weight: 1.02	Viscosity: 20		
Preflush:-	Type: Sea-water	Weight: 1.02	Viscosity: 20	Annulus length: 2m	
Temperature 1st Stage	BHST: 31 deg	BHCT: 29 deg	2nd Stage: BHST:	BHCT:	
Thick/Time: 1st Stage	Lead: N/A	Tail: 2.75 hrs	2nd Stage: Lead:	Tail:	

VOLUME CALCULATIONS		
	Bbls	
Stinger	1.78	
Annulus	33.18	
Total	34.96	

CEMENT CALCULATIONS								
		Vol(bbl)	Yield(cf/sx)	Bulk(sx)	Dry Additives	Depth:	from	to
1st Stage:	Lead	34.96	1.18	166.4	1% BWOC CaCl ₂		107	77
	Tail							
2nd Stage:	Lead							
	Tail							

MIX WATER CALCULATIONS								
		Bulk(sx)	Wtr(gps)	Vol(bbl)	Type	Mixed(bbl)	Used	Additives Used
1st Stage:	Lead	166.4	5.25	20.8	S/W	40	21	.01 gps D47, 1% BWOC CaCl ₂
	Tail							
2nd Stage:	Lead							
	Tail							

DISPLACEMENT DATA									
OPERATION		Strokes	Vol(bbl)	MW(sg)	Rate(bpm)	PSI	Start	Finish	% Returns
1st Stage:	Pump Preflush		2	1.02	5.0	200	3:22	3:23	100%
	Pump Lead								
	Pump Tail		34.96	1.90	7.3	410	3:26	3:32	100%
	Displace		2	1.02	5.0	100	3:34	3:35	100%
2nd Stage:	Pump Preflush								
	Pump Lead								
	Pump Tail								
	Displace								

Plug Bumped? N/A Floats Held? N/A Annulus circulated above MLS? N/A

REMARKS: Batch mixed the cement in Dowell batch mixing tank